

REMOVING RESIDUAL MAGNETIZATION IN A DATA TRANSDUCER

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Abstract of the Disclosure

Method and apparatus for removing residual magnetization in a data transducer, such as a recording head used to write data to a recording medium in a data storage device. A residual magnetization sense circuit senses a residual magnetization of a pole of the data transducer as a result of the application of a data transmission current to the transducer. A demagnetization current generator removes the residual magnetization by supplying the transducer with a demagnetizing current that decreases to a final magnitude in accordance with a selected profile. The demagnetization current preferably comprises a bi-directional, time varying current of selected frequency to the transducer that tapers linearly, exponentially or in a step-wise fashion to the final magnitude. The demagnetization profile is preferably continuously adapted during operation. Preferably, the sense circuit and demagnetization current generator are incorporated into a preamplifier/driver circuit which performs the demagnetization operation in a self-contained fashion.

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